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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,809	12/01/2003	Bernard Becker	2002P19186US	3680

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SIEMENS CORPORATION
INTELLECTUAL PROPERTY DEPT.
170 WOOD AVENUE SOUTH
ISELIN, NJ 08830

EXAMINER

CASAREGOLA, LOUIS J

ART UNIT	PAPER NUMBER
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3746

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/724,809

Applicant(s)

BECKER, BERNARD

Examiner

Louis J. Casaregola

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-20 is/are rejected.
- 7) ☒ Claim(s) 4-5 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

Objections To Claims

Claims 1-8 and 17-18 are objected to under 37 CFR 1.75(a) for the following reason:

Claim 1 and related dependent claims 2-8 and 17-18 include the step of "feeding the second partial stream to a carbon dioxide precipitation" (claim 1, last line). The cited expression is grammatically incomplete and requires a final term, such as plant, process, or the like, following "precipitation".

Claim Rejections - 35 USC 112

Claims 8-16 and 19-20 are rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 states that carbon dioxide is "stored in a liquid and/or solid aggregate state, *in particular a frozen state*" (emphasis added). The italicized language is indefinite. It is unclear whether the "frozen state" is an absolute claim requirement, and if it is, it would appear to contradict the liquid alternative described in the initial portion of the cited expression.

Claim 9 and related dependent claims 10-16 and 19-20 require "channeling the

first partial stream to the combustion chamber" (claim 9, line 6). As shown in the preferred embodiment of the invention, however, first partial stream 11 is not channeled to combustion chamber 5, but rather, is mixed with air at 25 to form air-exhaust mixture stream 17. It is mixture stream 17 rather than first partial stream 11 that is channeled to the combustor. The cited claim language thus appears to conflict with what is shown in the preferred embodiment, which indicates that applicant has not properly claimed the subject matter he considers to be his invention.

Claim Rejections - 35 USC 103

Claims 1-3, 6-11 and 14-20 are rejected under 35 USC 103(a) as being unpatentable over Scholl et al in view of Viteri.

Scholl discloses a gas turbine power plant with features generally similar to those in the present claims. Attention is called to Scholl's Figure's 1 and 2; note that turbine exhaust is branched into first stream 20 that is mixed with combustion air 1, and second stream 22 discharged at 17. Note also that the exhaust from any combustion turbine, including Scholl's, will necessarily include carbon dioxide. While it appears that the non-recycled portion of Scholl's exhaust is simply dumped into the atmosphere, it is well known to feed such partial exhaust streams to carbon dioxide precipitation systems as shown, for example, by Viteri; see condenser unit 140 in Figures 2 and 3. It would

have been obvious to include such a feature in Sholl's power plant for the purpose of pollution control and/or because any captured carbon dioxide is a useful product that could be sold.

With regard to claims 2, 3, 10 and 11, it is pointed out that Sholl's power plant includes exhaust cooling device 14 upstream of the exhaust branching point, and the cooling device may include second stage 35 as shown in Figure 2.

With regard to Claims 6, 7, 13, 14, etc., it is additionally pointed out that Viteri's precipitation unit, i.e. condenser 140, necessarily encompasses a cooling or refrigeration process, and Viteri specifically suggests storing precipitated carbon dioxide in liquid or other form as described, for example, in paragraph 0073.

Allowable Subject Matter

Claims 4 and 5 contain allowable subject matter and will be allowed if amended to overcome the §1.75(a) objection above.

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References

Stahl, Golomb et al, and Frutschi et al are cited as disclosing further pertinent examples of prior art gas turbines that recycle carbon dioxide from the turbine exhaust.



L. J. Casaregola
571-272-4826 (M-F; 7:30-4:00)
571-273-8300 FAX
April 2, 2007

If repeated attempts to reach the examiner by telephone are unsuccessful, the art unit supervisor, Anthony Stashick, can be reached at 571-272-4561.

Information regarding the status of this application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR, and status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).